

**REMARKS**

Claims 1-20 are all the claims pending in the application. By this amendment, claims 1, 5, 19 and 20 are amended. In view of the foregoing amendments and following remarks, applicant respectfully requests withdrawal of the rejections, and allowance of the claims.

I. 35 USC 112, 1<sup>st</sup> paragraph

Claims 1 and 5 stand rejected under 35 USC 112, 1<sup>st</sup> paragraph due to alleged lack of written description to show that the applicant was in possession of an uplink channel being open while the downlink channel is transmitting, as required by claims 1 and 5. In view of the foregoing rejections, the claims have been amended. Accordingly, applicant respectfully requests withdrawal of the rejections.

II. 35 USC 112, 2<sup>nd</sup> paragraph

Claims 19 and 20 stand rejected under 35 USC 112, 2<sup>nd</sup> paragraph due to alleged indefiniteness. The Examiner states that the claims are generally narrative and indefinite, with non-structured random limitations about how the limitations would apply to any independent claims from which they depend. As shown in the foregoing amendments, the claims are amended in a manner that is believed to overcome the rejections. Thus, applicant respectfully requests withdrawal of the rejections, and allowance of the claims, in view of the lack of a prior art rejection,

III. Prior Art Rejections

Claims 1-8, 17 and 18 stand rejected under 35 USC 103 due to alleged obviousness based on the Examiner's proposed combination of Adiwoso in view of Schiff and Saunders. Claims 9 and 10 stand rejected based on the Examiner's proposed combination of Adiwoso, Schiff and Saunders in view of Hreha. Claims 11-14 stand rejected based on the Examiner's proposed

combination of Adiwoso, Schiff and Saunders in view of Setoyama. Claims 15 and 16 stand rejected based on the Examiner's proposed combination of Adiwoso, Schiff and Saunders in view of Sharon. The Examiner has not provided any grounds of rejection with respect to claims 19 and 20.

The presently claimed invention is directed to an integrated multispot satellite communication system in a multimedia broadcasting network with a return channel. A satellite receives a multimedia broadcast signal from a provider, and transmits said multimedia broadcast signal to a user in response to a request from said user. The burst synchronization is common for the user and the service provider, such that the transmission rate in a downlink direction from the satellite is a whole multiple of a clock reference of said network. A network controller receives different return channels from said user and said provider, via said satellite, and a signaling part of said multimedia broadcast signal is addressed from said provider to said network controller. Different uplink channels from a service provider and a user are inserted into a downlink signal in a synchronous manner, such that a period of the downlink frame is equal to a period of the uplink frame.

As a result of the claimed invention, both the user and the provider of the multimedia service, to use the burst synchronization scheme defined in the DVB-RCS standard. Further, the on-board DVB multiplexer utilizes synchronous multiplexing instead of asynchronous multiplexing, and the generation of the clock frequency on board the satellite is simplified through the use of a single reference frequency both for synchronization with the interactive network and for generating the downlink signal. The claimed invention permits the network clock reference (NCR) frequency to be generated on board the satellite; synchronization of the equipment on board with the interactive network is substantially simplified.

It should be noted that Adiwoso is directed to establishment of separate links for gateways on one hand and user on the other hand, so as to partition the bandwidth and power allocation. Different bands of the user spectrum are used for the user and access links. As noted by the Examiner, there is no common synchronization scheme in Adiwoso, such that the transmission rate in the downlink direction is a whole multiple of a clock reference of the network. The Examiner also notes that Adiwoso does not disclose that different uplink channels from a service provider and a user are inserted into a downlink signal in a synchronous manner, such that the period of the downlink frame is equal to the period of the uplink frame.

Applicant submits that Adiwoso cannot disclose or suggest having the different uplink channels in a single downlink because Adiwoso teaches that segregation of user traffic from gateway traffic for cost and bandwidth management purposes. This appears to be the main purpose of Adiwoso, and as such applicant respectfully submits that it would not be proper to modify Adiwoso or combine Adiwoso with a secondary reference such that such a function would not be possible with the proposed modification or combination.

To cure the above deficiencies of Adiwoso, the Examiner turns to Schiff. Schiff is directed to a synchronization system for regenerative subtransponder of a satellite communication system. Actual time intervals are compared with optimal time intervals for properly synchronized transmission from each station, and adjustment if necessary. A number of earth stations can each transmit a burst of information during its subframe interval. One of the earth stations is a master station, and is the first to transmit information. After the master station is “timed”, the adjustment is made for the other earth stations. Schiff teaches that each of the earth stations sharing the carrier should have the same data rate.

Schiff itself only discloses a single type of station, and the premise for properly timing the stations other than the master station is that the characteristics of all of the stations would be similar enough that the timing of the master station would accurately reflect and be applicable to the necessary timing for the other non-master stations.

The Examiner appears to understand that Schiff only discloses a plurality of users sharing the downlink channel. The Examiner states that because Adiwoso discloses plural types of stations, it would have been obvious to modify Schiff to interpret the master station as the provider and the other types of stations as the users. However, applicant respectfully disagrees with this technical interpretation.

Applicant respectfully disagrees with the above technical characterization, and requests that the Examiner provide further evidence and explanation as to *the reason* why it is proper to characterize the master station of Schiff as a provider and the other stations of Schiff as users, in view of the arguments presented in these Remarks.

Applicant respectfully submits that Schiff teaches that the master station and other stations should basically have the same data rate. However, applicant respectfully submits that the provider and the user would not have the same data rate. Applicant respectfully submits that if the data rate is not the same, then Schiff could not properly perform its intended purpose of timing the other stations. The characteristics of the provider and user are too different in this regard for such a substitution to have been obvious to one skilled in the art at the time of the invention.

Further, applicant respectfully submits that one skilled in the art at the time of the invention would not have been motivated to perform such adjustment for all stations based on the master station, because this is exactly against which Adiwoso teaches. For example, Adiwoso

teaches separating the user and gateway traffic for the purpose of power reduction and bandwidth management. Applicant respectfully submits that if the gateway was made as the master station and the users were made as the other stations, the power and bandwidth not be segregated but would instead be standardized based on the master station. Thus, all of the benefits of Adiwoso would be lost if the teaching of Schiff were to be applied as suggested by the Examiner. Further, if the central purpose and functionality of Adiwoso is to be maintained, then one skilled in the art at the time of the invention would not engage in the type of timing and adjustment based on the master station as disclosed in Schiff.

Similarly, while the Examiner argued that the motivation to combine Schiff and Adiwoso would have been to allow multiple users to transmit upstream on the same frequency, as noted above, even if the scheme of Schiff were adopted, the Examiner's motivation still does not speak to allowing not just multiple users, but user and providers, to share the same frequency and efficiently use bandwidth. One skilled in the art would understand that if the master station was the provider and the other stations were the users, and the scheme of Schiff was applied to Adiwoso, then Adiwoso would actually be *less* efficient, because Schiff does not account for the difference between a user and a provider in terms of power and bandwidth requirements.

Thus, Applicant respectfully submits that the proposed combination of references fails to disclose or suggest a common means of burst synchronisation such that the transmission rate in a downlink direction from the satellite is a whole multiple of a clock reference of said network; and *wherein different uplink channels from a service provider and a user are inserted into a downlink signal in a synchronous manner* such that a period of the downlink frame is equal to a period of the uplink frame, as recited in independent claims 1 and 5. As admitted by the Examiner, Adiwoso alone does not disclose or suggest this feature, and as explained above by

applicant, one skilled in the art at the time of the invention would not have been motivated to combine Schiff into Adiwoso in a manner that fairly cures the deficiencies of Adiwoso so as to teach the claimed combinations of features recited in independent claims 1 and 5.

Additionally, applicant respectfully submits that Saunders also fails to cure the above-noted deficiencies.

Applicant respectfully submits that all of the dependent claims are allowable due to at least the same reasons as the independent claims from which they depend. Additionally, applicant respectfully requests the allowability of claims 19 and 20 in view of the lack of a prior art rejection, and in view of the curing of the indefiniteness rejection for at least the reasons discussed above.

Thus, applicant respectfully requests withdrawal of the rejections, and allowance of the claims.

#### IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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